

Launch Mission Execution Forecast

Mission: Falcon 9 IXPE

Issued: 6 Dec 2021 / 0800L (1300Z)

Valid: 9 Dec 2021 / 0100 – 0230L (0600 – 0730Z)



Forecast Discussion: A weak boundary will move into Central Florida tomorrow, before high pressure builds back in on Thursday. Models are in much better agreement this system will bring an increase in cloud coverage, but only a slight increase in precipitation chances. The front will also be over the booster recovery area, increasing wind speeds and rain chance in that area. Finally, upper-level winds over the Space Coast will be near 100 knots at 35,000 feet, slightly increasing the risk for wind shear issues. The primary launch weather concerns are cumulus clouds and possible thick cloud layers associated with the weak boundary near the Spaceport.

Central Florida weather remains much the same for the back-up opportunity as high pressure, which will remain over the area until the weekend, pushes out the boundary. Upper-level winds will decrease over the launch area and the front will no longer be near the booster recovery area, lessening the impact of those added risk criteria. The launch weather concerns remain a slight chance for cumulus clouds or thick clouds associated with the weak boundary.

	Probability of Violating Weather Constraints									
Day	20%	20% Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule								
ch	Weather Conditions								Additional Risk Criteria	
aunch	Weather/Visibility:		Isold Showers / 7 mi.		Clouds Type Coverage Bas		Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low-Mod
ľ	Temp/Humid	ity:	64°F / 92%	, 6	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather:	Low-Mod
	Liftoff Winds (200'):		: 280° 8 - 12 mph		Altostratus	Scattered	12,000	15,000	Solar Activity:	Low
,	Probability of Violating Weather Constraints									
Delay	20%	20% Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule								
	Weather Conditions								Additional Risk Criteria	
24-Hour	Weather/Visibility: Isold Show		vers / 7 mi.	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low	
24.	Temp/Humidity:		66°F / 95%		Cumulus	Scattered	3,000	10,000	Booster Recovery Weather:	Low
	Liftoff Winds (200') : 120° 5 - 1) mph	Altostratus	Scattered	12,000	15,000	Solar Activity:	Low	
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.										
Next Forecast Will Be Issued 7 Dec 2021										